

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A process for coproducing butene oligomers and tert-butyl ethers from isobutenic C₄ streams by

- a) partly oligomerizing the isobutenic C₄ streams over an acidic catalyst to give butene oligomers, and subsequently
- b) etherifying the remaining isobutene with an alcohol under acidic catalysis to give tert-butyl ethers,

characterized in that wherein

the etherification is carried out under acid catalysis in stage b) in at least two reaction stages, of which at least the last reaction stage is carried out as a reactive distillation, and the butene oligomers obtained in stage a) are removed before the acid-catalyzed etherification in stage b).

Claim 2 (Currently Amended): The process as claimed in claim 1,

characterized in that wherein

the acidic catalyst used in stage a) is an ion exchanger whose protons have partly been exchanged for metal ions of groups 1 to 12 of the Periodic Table.

Claim 3 (Currently Amended): The process as claimed in claim 2,

characterized in that wherein

from 1 to 60% of the protons of the ion exchanger used in stage a) have been exchanged for metal ions.

Claim 4 (Currently Amended): The process as claimed in ~~any of claims 1 to 3 claim~~
1,
~~characterized in that wherein~~
the oligomerization in stage a) is carried out up to an isobutene conversion of from 50 to 95%.

Claim 5 (Currently Amended): The process as claimed in ~~any of claims 1 to 4 claim~~
1,
~~characterized in that wherein~~
the oligomerization in stage a) is carried out in the presence of a moderator.

Claim 6 (Currently Amended): The process as claimed in claim 5,
~~characterized in that wherein~~
the moderator used is MTBE, TBA, methanol or water in a molar ratio of from 0.01 to 5 per mole of isobutene.

Claim 7 (Currently Amended): The process as claimed in ~~any of claims 1 to 6 claim~~
1,
~~characterized in that wherein~~
the alcohol used in stage b) is methanol or ethanol.

Claim 8 (Currently Amended): The process as claimed in ~~any of claims 1 to 7 claim~~
1,
~~characterized in that wherein~~

the polyunsaturated hydrocarbons contained in the isobutenic C₄ streams are catalytically hydrogenated before the oligomerization in stage a).

Claim 9 (Currently Amended): The process as claimed in claim 8,

characterized in that wherein

the polyunsaturated compounds are hydrogenated in at least two reaction stages, of which at least the last reaction stage is carried out in the presence of 0.05 - 100 ppm by weight of CO.

Claim 10 (Currently Amended): The process as claimed in ~~any of claims 1 to 9~~ claim 1,

characterized in that wherein

more than 90% of the butene oligomers obtained in stage a) are isobutene oligomers.